



Inventor Name: [Redacted] S. Hartmann  
Case Name and No.: RF-SC-0001  
Title of Application: "Surface Acoustic Wave Identification Tag Having Enhanced Data Content and Method of Operation and Manufacture Thereof"  
Attorney of Record: Jimmy L. Heisz  
Phone No.: (972) 480-8800

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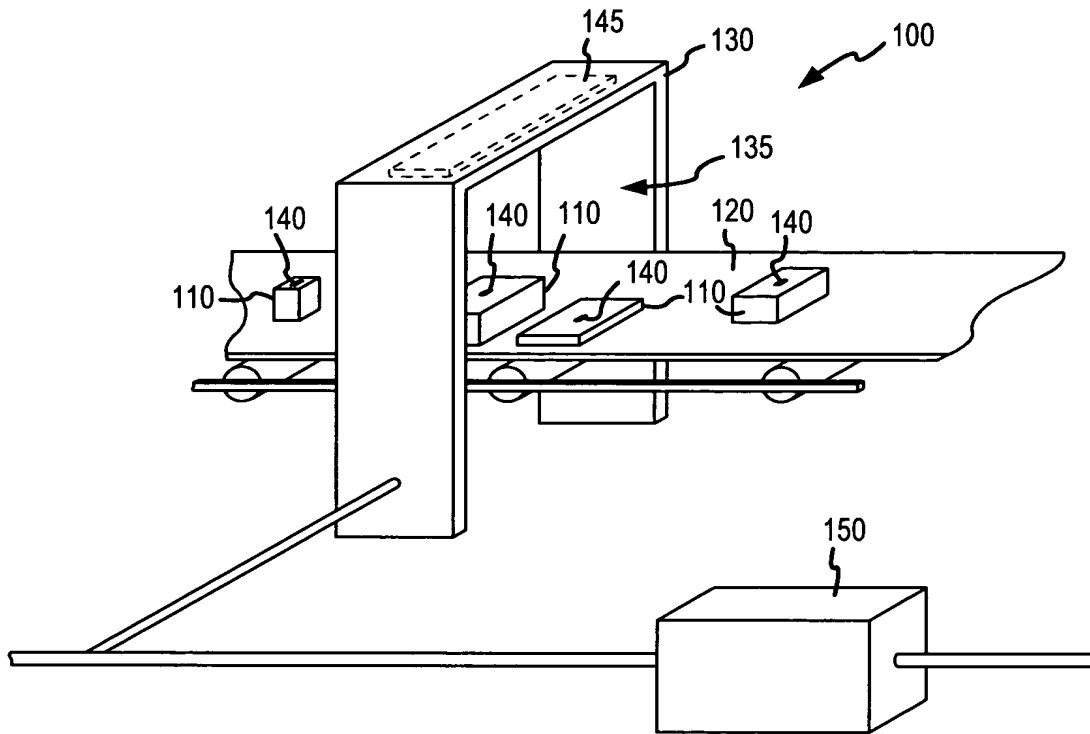


FIG.1



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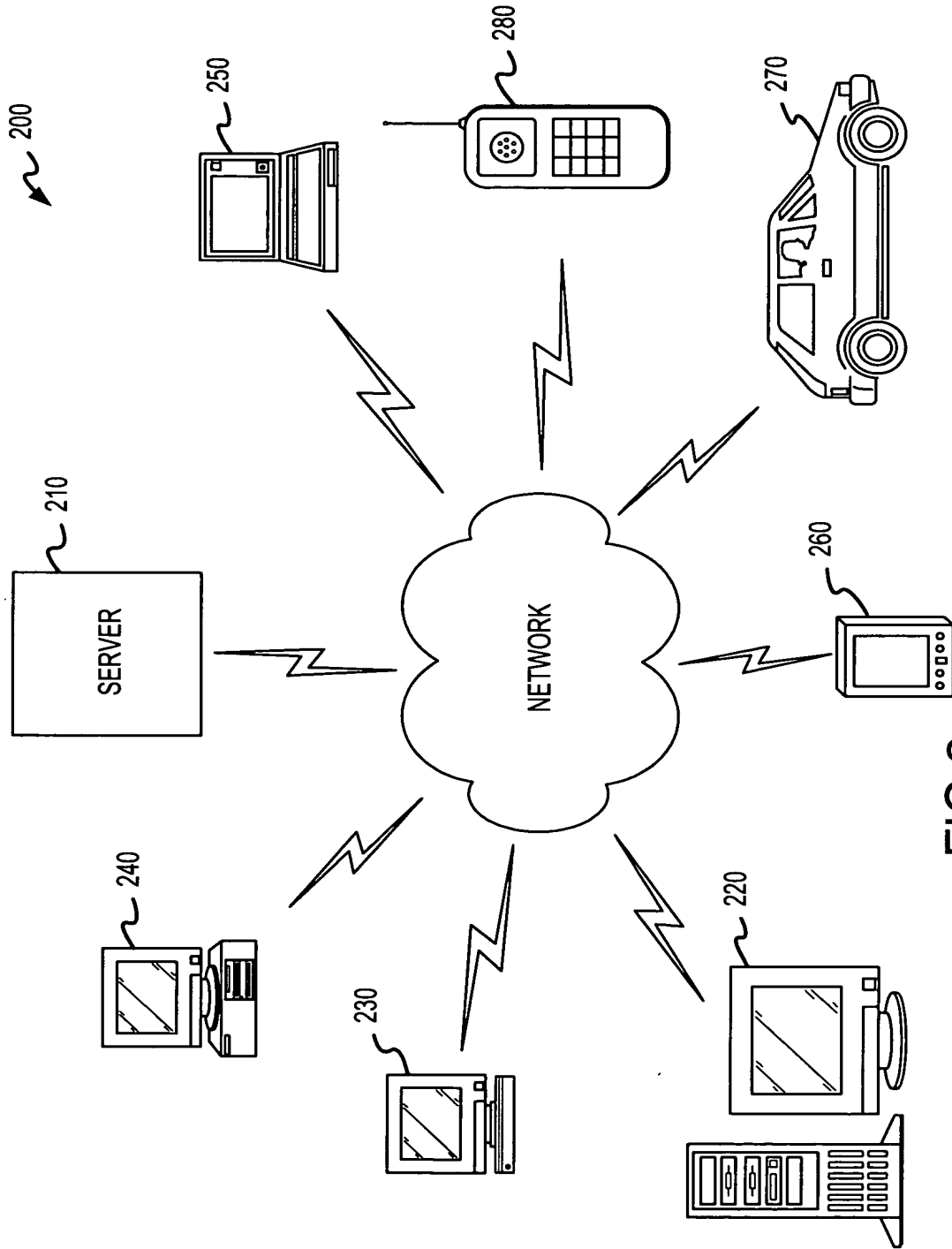
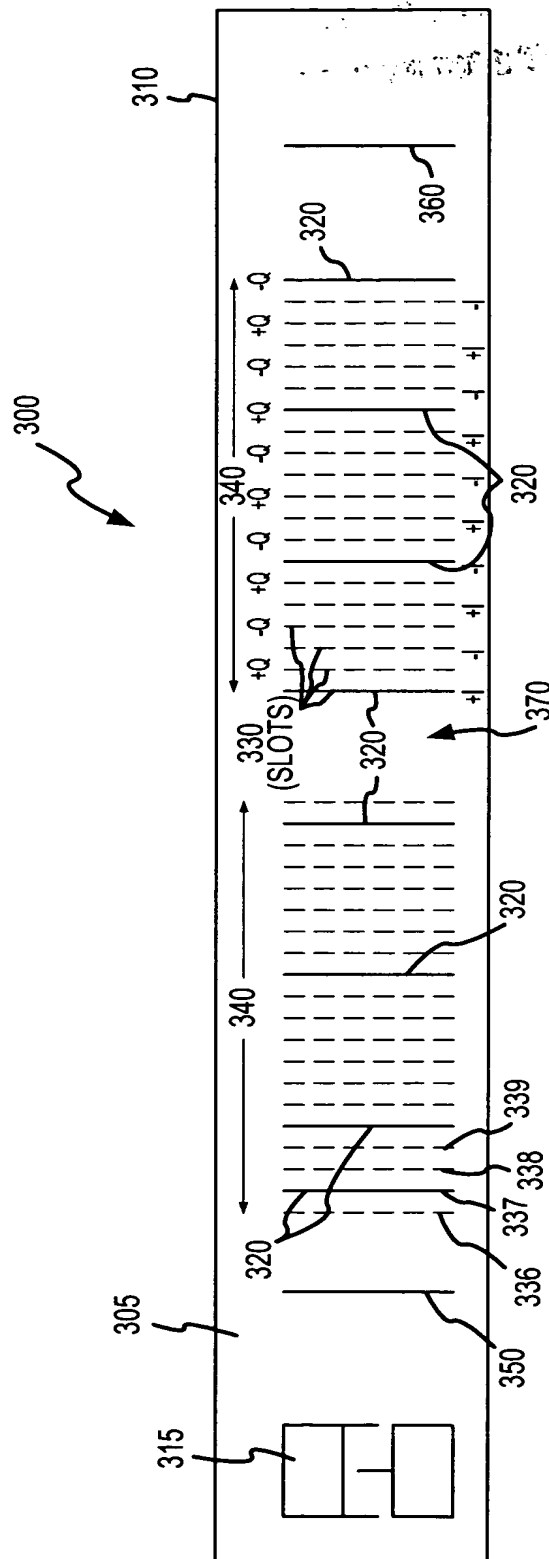


FIG.2





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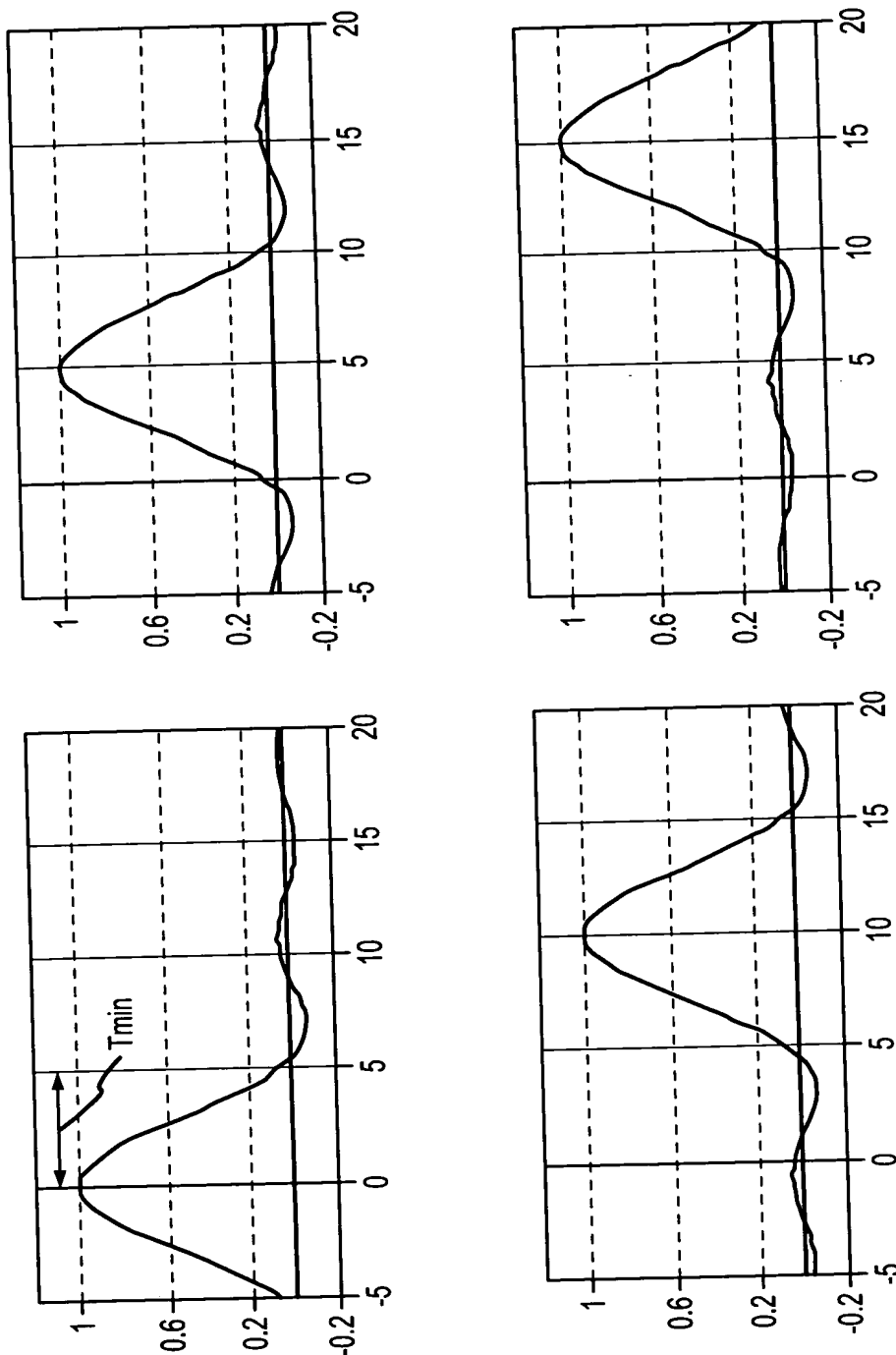


FIG.4



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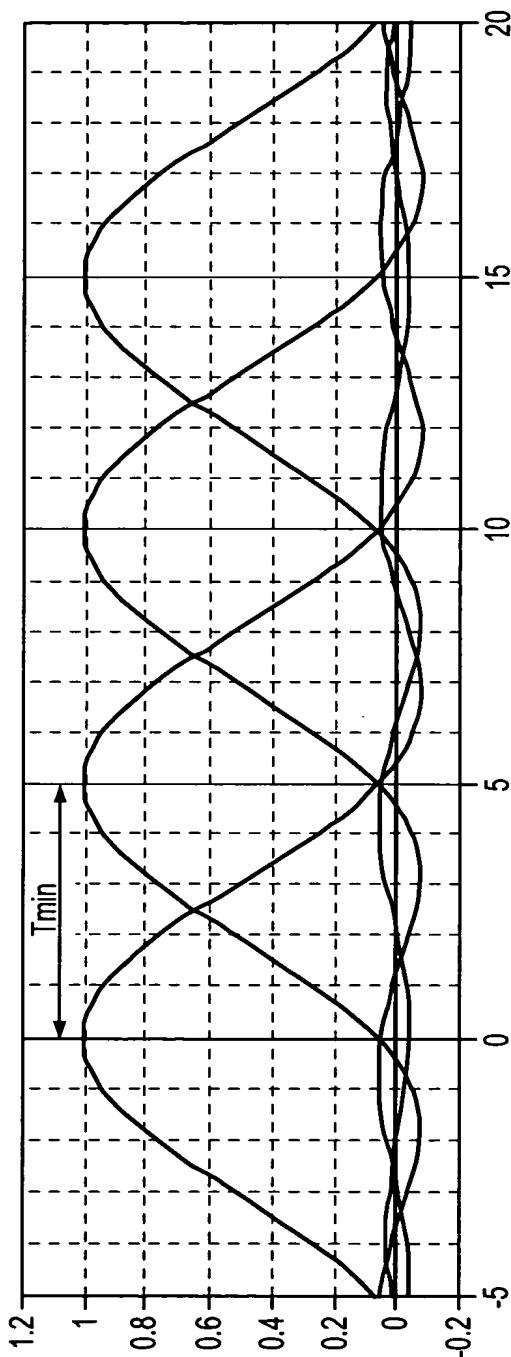


FIG.5



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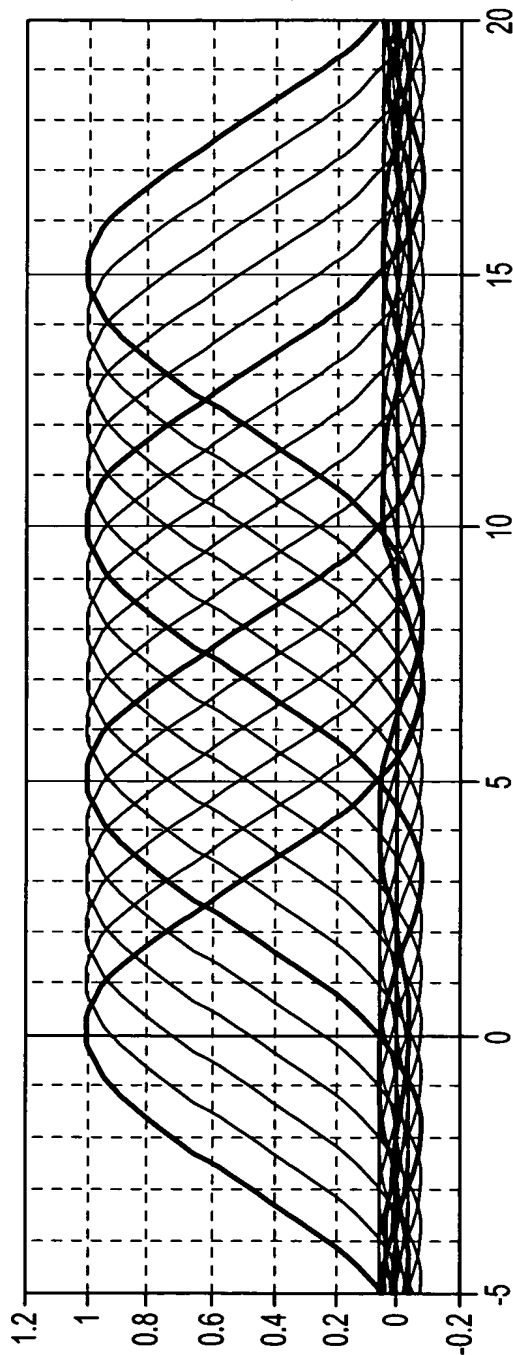


FIG.6



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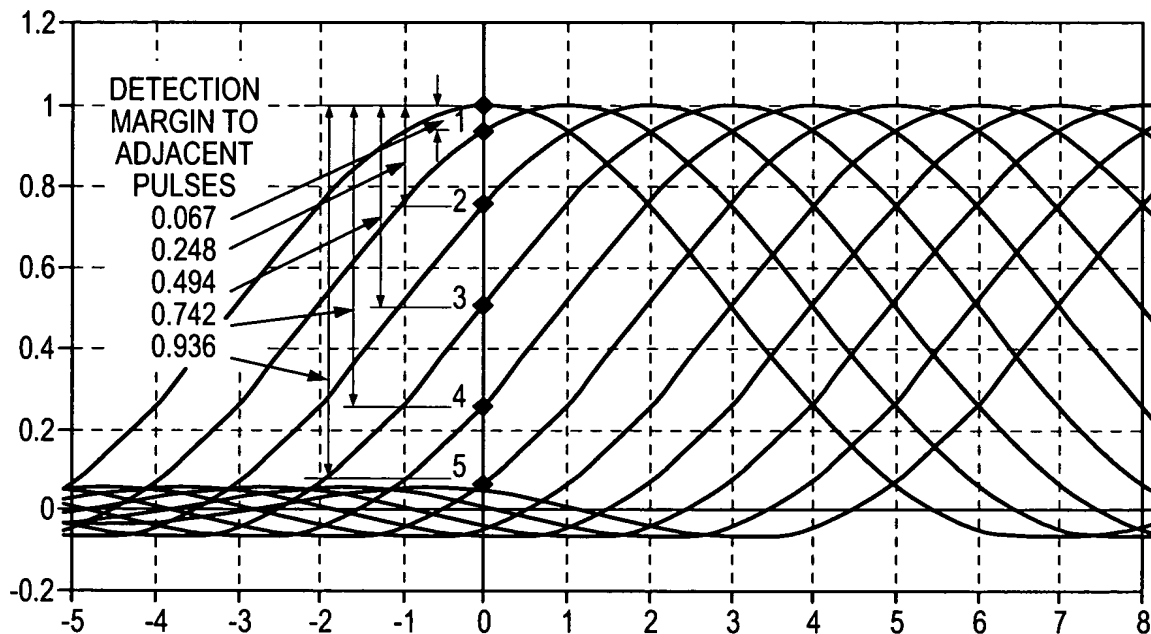


FIG.7



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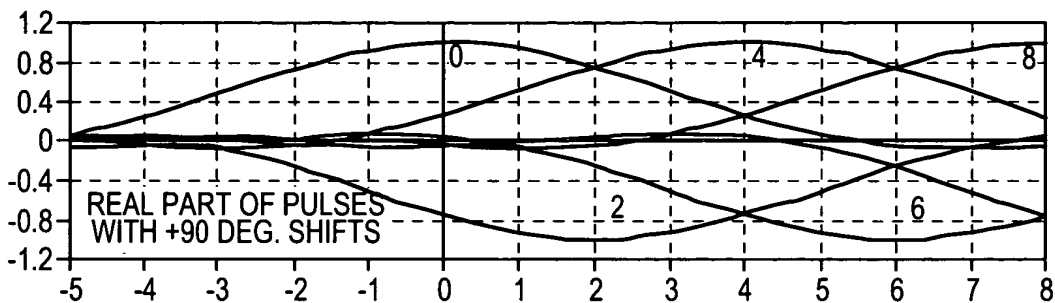


FIG.8A

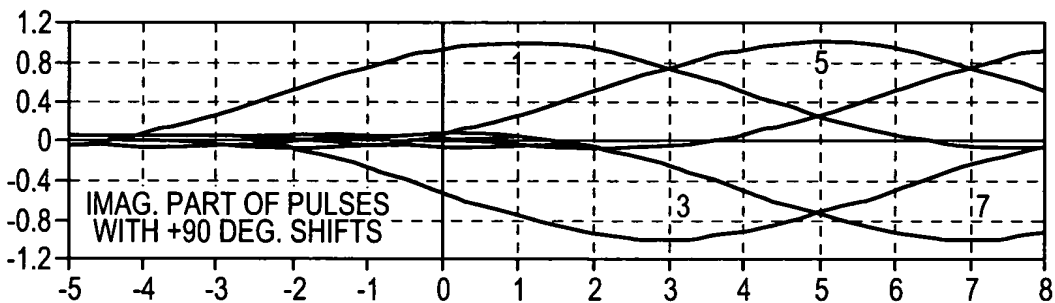


FIG.8B





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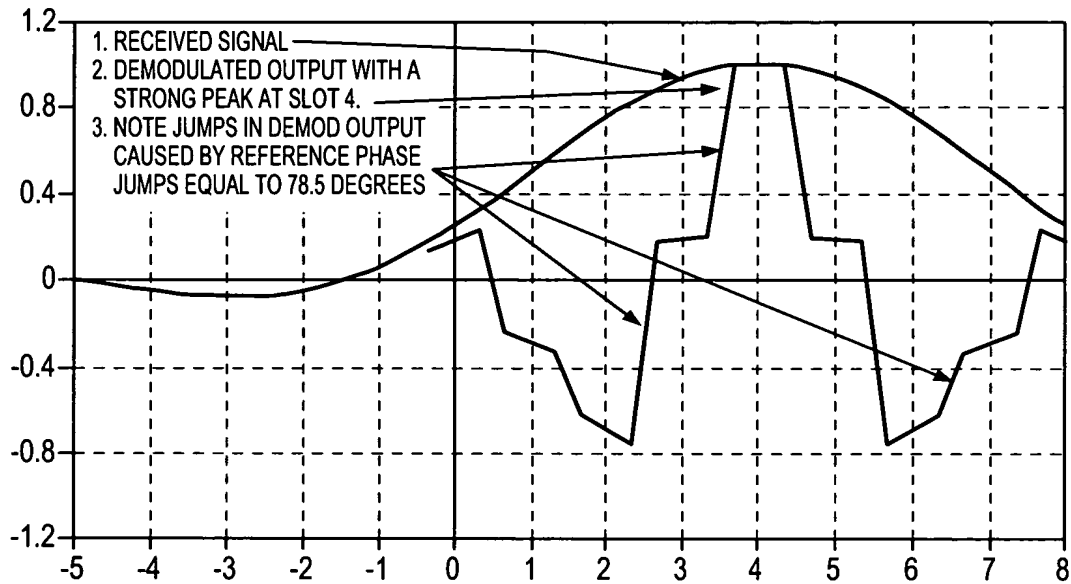


FIG.9



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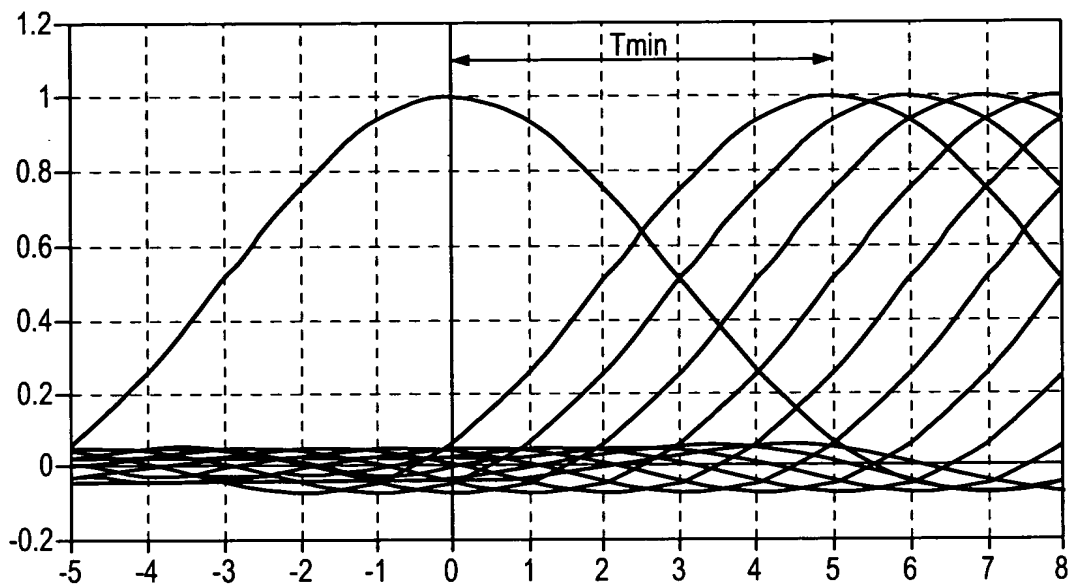


FIG.10



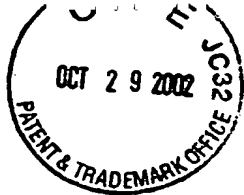
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THREE REFLECTORS WITH MINIMUM SPACING OF 5 SLOTS HAVE 286 POSSIBLE PLACEMENTS IN 21 SLOTS  
EACH ROW SHOWS A UNIQUE PLACEMENT FOR 2 ITEMS (X&Y) AND MULTIPLE PLACEMENT FOR THE 3RD (Z)

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	#STATES
X					Y					Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	11
X						Y					Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	10
X							Y														9
X								Y													8
X									Y												7
X										Y											6
X											Y										5
X												Y									4
X													Y								3
X														Y							2
X															Y						1
	X						Y				Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	10
	X							Y				Z	Z	Z	Z	Z	Z	Z	Z	Z	9
	X								Y				Z	Z	Z	Z	Z	Z	Z	Z	8
	X									Y				Z	Z	Z	Z	Z	Z	Z	7
	X										Y				Z	Z	Z	Z	Z	Z	6
	X											Y				Z	Z	Z	Z	Z	5
	X												Y				Z	Z	Z	Z	4
	X													Y				Z	Z	Z	3
	X														Y				Z	Z	2
	X															Y				Z	1
		X					Y				Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	8
		X						Y				Z	Z	Z	Z	Z	Z	Z	Z	Z	7
		X							Y				Z	Z	Z	Z	Z	Z	Z	Z	6
		X								Y				Z	Z	Z	Z	Z	Z	Z	5
		X									Y				Z	Z	Z	Z	Z	Z	4
		X										Y				Z	Z	Z	Z	Z	3
		X											Y				Z	Z	Z	Z	2
		X												Y				Z	Z	Z	1
			X				Y				Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	6
			X					Y				Z	Z	Z	Z	Z	Z	Z	Z	Z	5
			X						Y				Z	Z	Z	Z	Z	Z	Z	Z	4
			X							Y				Z	Z	Z	Z	Z	Z	Z	3
			X								Y				Z	Z	Z	Z	Z	Z	2
			X									Y				Z	Z	Z	Z	Z	1
				X			Y						Z	Z	Z	Z	Z	Z	Z	Z	5
				X				Y						Z	Z	Z	Z	Z	Z	Z	4
				X					Y						Z	Z	Z	Z	Z	Z	3
				X						Y						Z	Z	Z	Z	Z	2
				X							Y						Z	Z	Z	Z	1
					X		Y						Z	Z	Z	Z	Z	Z	Z	Z	6
					X			Y						Z	Z	Z	Z	Z	Z	Z	5
					X				Y						Z	Z	Z	Z	Z	Z	4
					X					Y						Z	Z	Z	Z	Z	3
					X						Y						Z	Z	Z	Z	2
					X							Y						Z	Z	Z	1
						X	Y						Z	Z	Z	Z	Z	Z	Z	Z	5
						X		Y						Z	Z	Z	Z	Z	Z	Z	4
						X			Y						Z	Z	Z	Z	Z	Z	3
						X				Y						Z	Z	Z	Z	Z	2
						X					Y						Z	Z	Z	Z	1
							X	Y						Z	Z	Z	Z	Z	Z	Z	5
							X		Y						Z	Z	Z	Z	Z	Z	4
							X			Y						Z	Z	Z	Z	Z	3
							X				Y						Z	Z	Z	Z	2
							X					Y						Z	Z	Z	1
								X	Y						Z	Z	Z	Z	Z	Z	5
								X		Y						Z	Z	Z	Z	Z	4
								X			Y						Z	Z	Z	Z	3
								X				Y						Z	Z	Z	2
								X					Y						Z	Z	1
									X	Y						Z	Z	Z	Z	Z	5
									X		Y						Z	Z	Z	Z	4
									X			Y						Z	Z	Z	3
									X				Y						Z	Z	2
									X					Y						Z	1
										X	Y						Z	Z	Z	Z	5
										X		Y						Z	Z	Z	4
										X			Y						Z	Z	3
										X				Y						Z	2
										X					Y						1
											X	Y					Z	Z	Z	Z	5
											X		Y					Z	Z	Z	4
											X			Y					Z	Z	3
											X				Y					Z	2
											X					Y					1
												X	Y				Z	Z	Z	Z	5
												X		Y				Z	Z	Z	4
												X			Y				Z	Z	3
												X				Y				Z	2
												X					Y				1
													X	Y				Z	Z	Z	5
													X		Y				Z	Z	4
													X			Y				Z	3
													X				Y				2
													X					Y			1
														X	Y			Z	Z	Z	5
														X		Y			Z	Z	4
														X			Y			Z	3
														X				Y			2
														X					Y		1
															X	Y			Z	Z	5
															X		Y			Z	4
															X			Y			3
															X				Y		2
															X					Y	1
																X	Y			Z	5
																X		Y			4
																X			Y		3
																X				Y	2
																X					1
																	X	Y			5
																	X		Y		4
																	X			Y	3
																	X				2
																	X				1
																		X	Y		5
																		X		Y	4
																		X			3
																		X			2



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STATE	0	1	2	3	4	5	6	7	8	9
0	X			Y						
1	X					Y				
2	X							Y		
3	X									Y
4		X			Y					
5		X					Y			
6		X							Y	
7			X			Y				
8			X					Y		
9			X							Y
10				X			Y			
11				X					Y	
12					X			Y		
13					X					Y
14						X			Y	
15							X			Y

A: IN-PHASE SUB-GROUP

FIG.12A

STATE	0	1	2	3	4	5	6	7	8	9
0	X			Y						
1	X					Y				
2	X							Y		
3	X									Y
4		X			Y					
5		X					Y			
6		X							Y	
7			X			Y				
8			X					Y		
9			X							Y
10				X			Y			
11				X					Y	
12					X			Y		
13					X					Y
14						X			Y	
15							X			Y

B: QUADRATURE PHASE SUB-GROUP

FIG.12B



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IN 10 SLOTS, TWO REFLECTORS WITH MINIMUM SPACING OF 2 SLOTS HAVE 36 POSSIBLE PLACEMENTS

STATE	0	1	2	3	4	5	6	7	8	9
0	X		Y							
1	X			Y						
2	X				Y					
3	X					Y				
4	X						Y			
5	X							Y		
6	X								Y	
7	X									Y
8		X		Y						
9		X			Y					
10		X				Y				
11		X					Y			
12		X						Y		
13		X							Y	
14		X								Y
15			X		Y					
16			X			Y				
17			X				Y			
18			X					Y		
19			X						Y	
20			X							Y
21				X		Y				
22				X			Y			
23				X				Y		
24				X					Y	
25				X						Y
26					X		Y			
27					X			Y		
28					X				Y	
29					X					Y
30						X		Y		
31						X			Y	
32						X				Y
33							X		Y	
34							X			Y
35								X		Y

FIG.13



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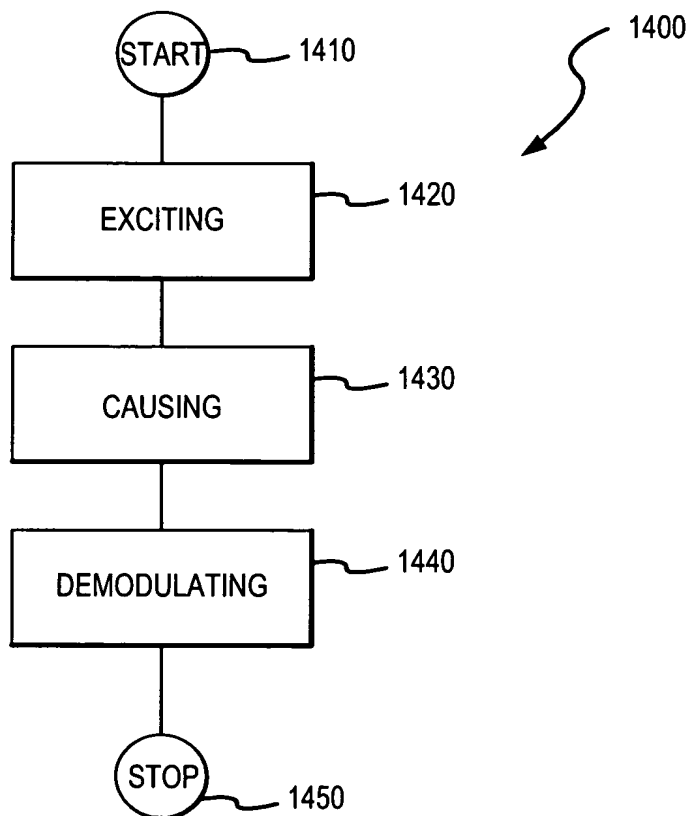


FIG.14



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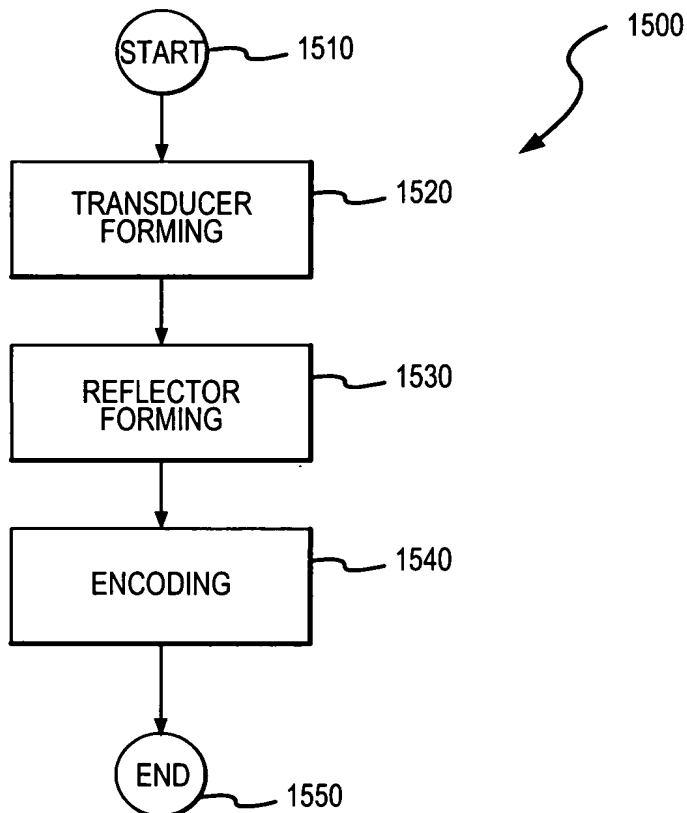


FIG.15